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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/411,070	10/04/1999	ROYCE E. SLICK	36J.P229	7819

5514 7590 10/07/2003

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NEW YORK, NY 10112

EXAMINER

STULBERGER, CAS P

ART UNIT	PAPER NUMBER
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2132

DATE MAILED: 10/07/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/411,070

Applicant(s)

SLICK ET AL.

Examiner

Cas Stulberger

Art Unit

2132

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-104 and 122-140 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-104 and 122-140 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 October 1999 is/are: a) ☒ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,7,9.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 16, 32, 48, 64, 79, 95, 126 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applied Cryptography by Bruce Schneier.

In regards to claims to ,Schneier discloses Double Encryption where a plaintext message is encrypted using a first key and then the resulting ciphertext is encrypted using a second key (Schneier: page 357, Chapter 15, Section 15.1). Schneier also discloses using an asymmetric method of encrypting messages (Schneier: pages 31-32, Chapter 2, Section 2.5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of Double Encryption as disclosed by Schneier with the method of using asymmetric key encryption as disclosed by Schneier since only the person with the private key can decrypt the message (Schneier: page 31, Chapter 2, Section 2.5, second paragraph).

3. Claims 2-7, 10-13, 17-24, 27-29, 33-38, 42-45, 49-55, 59-61, 65-70, 74-76, 80-86, 90-92, 96-101, 122, 126-132, and 136-138 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,560,581 B1 to Fox et al in view of Applied Cryptography by Bruce Schneier.

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In regards to claims 2, 4-7, 10-13, 17-22, 27-29, 33, 35-38, 42-45, 49-54, 60-61, 65, 67-70, 74-76, 80-85, 90-92, 96, 98-101, 122, 126-131, and 136-138, Fox discloses encrypting a document using a symmetric encryption key and then encrypt that key with a public key of the merchant that is intended to receive the document (Fox: column 2, lines 61-65). However Fox does not disclose again encrypting using a set of asymmetric keys.

Schneier discloses Triple key Encryption using three different sets of keys (Schneier: page 362, Chapter 15, Section 15.2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method of double encryption as disclosed by Fox with the method of triple encryption as disclosed by Schneier in order to guarantee that triple encryption doesn't reduce to single encryption (Schneier: page 362, Chapter 15, first full paragraph).

4. In regards to claims 3, 34, 66, and 97, Fox discloses a symmetric key generator, which generates the random symmetric bulk data encryption keys used to encrypt the message sent to others (Fox: column 17, lines 62-64). This meets the limitation of "wherein the first key is randomly generated."

5. In regards to claims 10, 24, Fox discloses that there is a hashing calculator which translates the data according to a hashing function into a fixed-size, and often reduced, hash value which is representative of the original data (Fox: column 18, lines 50-53). The hash is digitally signed using the private signing key pair (Fox: column 18, lines 59-65).

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6. In regards to claims 23, 55, 86, and 132, Fox discloses that the keys may be stored and used only in the smart card so that they are not even exposed to sophisticated software attacks (Fox: column 19. lines 11-20).

7. Claims 8-10, 14-15, 24-26, 30-31, 29-41, 46-47, 56-58, 62-63, 71-73, 77-78, 87-89, 93-94, 102-104, 123-124, 133-135 and 139-140 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,560,581 B1 to Fox et al in view of Applied Cryptography by Bruce Schneier as applied to claims 2-7, 10-13, 17-24, 27-29, 33-38, 42-45, 49-55, 59-61, 65-70, 74-76, 80-86, 90-92, 96-101, 122, 126-132, and 136-138 above, and further in view of U.S. Patent No. 6,243,466 B1 to Young et al.

In regards to claims 2-7, 10, 13, 17-22, 24, 29, 33-38, 45, 49-54, 61, 65-70, 76, 80-85, 92, 96-101, 122, 126-131, 138 Fox does not disclose sending the header through email.

Young discloses sending a certified piece of mail. The packet sent consists of a header indicating the certified email, the encryption of the email under the sender's own certified public key, other information, and is signed using the sender's own private key (Young: column 8, lines 47-67). Signing with the sender's private key meets the limitation of "information related to the identity of at person" since only the sender's public key can decrypt the signature. This also meets the limitation of "transmitting the header by email."

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the system of using email as disclosed by Young with the method of creating a hash and encryption as disclosed by Fox in order to provide a very high level of security (Young: Abstract).

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Conclusion

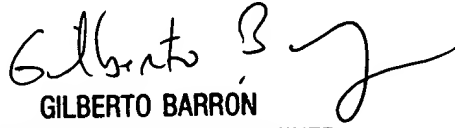
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cas Stulberger whose telephone number is (703) 305-8034. The examiner can normally be reached on Monday - Thursday, 9:00A.M. - 5:00P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (703) 305-1830. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

CS

CS
September 30, 2003


GILBERTO BARRON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100